



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-0787; Directorate Identifier 2015-NE-10-AD]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney Division Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Pratt & Whitney Division (PW) PW4164, PW4168, PW4168A, PW4164C, PW4164C/B, PW4164-1D, PW4168-1D, PW4168A-1D, PW4170, PW4164C-1D, PW4164C/B-1D, PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4062A, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4460, PW4462, and PW4650 turbofan engines with a low-pressure turbine (LPT) 4th stage inner air seal (IAS), P/N 51N038, installed. This proposed AD was prompted by the discovery, during routine overhaul of the LPT, of cracks in the barrel section of the 4th stage IAS. This proposed AD would require removal of the LPT 4th stage IAS, P/N 51N038, according to a prescribed schedule. We are proposing this AD to prevent failure of the LPT 4th stage IAS, which could lead to an uncontained IAS release, damage to the engine, and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Pratt & Whitney Division, 400 Main St., East Hartford, CT 06108; phone: (860) 565-8770; fax: (860) 565-4503. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call (781) 238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA- 2015-0787; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Katheryn Malatek, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7747; fax: 781-238-7199; email: katheryn.malatek@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA- 2015-0787; Directorate Identifier 2015-NE-10-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We propose to adopt a new AD for all PW PW4164, PW4168, PW4168A, PW4164C, PW4164C/B, PW4164-1D, PW4168-1D, PW4168A-1D, PW4170, PW4164C-1D, PW4164C/B-1D, PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4062A, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4460, PW4462, and PW4650 turbofan engines with an LPT 4th IAS, P/N 51N038, installed. This proposed AD was prompted by 9 occasions of discovering, during routine overhaul of the LPT, cracks in the barrel section of the 4th stage IAS. This condition, if not corrected, could result in uncontained IAS release, damage to the engine, and damage to the aircraft. This proposed AD would require removal of the 4th stage IAS, P/N 51N038, according to a prescribed schedule. We are proposing this AD to prevent failure of the LPT 4th stage IAS, which could lead to an uncontained IAS release, damage to the engine, and damage to the airplane.

Related Service Information

We reviewed PW Alert Service Bulletin (ASB) No. PW4G-100-A72-254, dated December 12, 2014. The ASB describes procedures and timetables for removing the LPT 4th stage IAS. This service information is reasonably available; see ADDRESSES for ways to access this service information.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require removal of the LPT 4th stage IAS, P/N 51N038, according to a prescribed schedule.

Differences Between this Proposed AD and the Service Information

PW ASB No. PW4G-100-A72-254, dated December 12, 2014, applies to certain PW4000 engine models. This proposed AD applies to the 7 engine models listed in the ASB, plus 4 additional PW4000 engine models certificated for use in the U.S. for which the affected LPT 4th IAS, P/N 51N038, is eligible for installation. These 11 engine models are listed in paragraph (c)(1) of this AD.

We further expanded the applicability to cover 16 additional engine models, listed in paragraph (c)(2) of this AD, which are prohibited from installing P/N 51N038, if that part was ever installed on any engine listed in paragraph (c)(1) of this AD. The unsafe condition described in paragraph (d) of this AD could exist in the part if it was ever operated in any engine listed in paragraph (c)(1) of this AD.

Costs of Compliance

We estimate that this proposed AD affects 72 engines installed on airplanes of U.S. registry. We also estimate that 9 of the engines would require replacement parts

during shop visit, and that for these engines the pro-rated replacement parts cost would be \$23,805 per engine, and compliance with this proposed AD would require about 49 hours of labor per engine. The average labor rate is \$85 per hour. We also estimate that 63 of the engines would require replacement parts during LPT overhaul, that the prorated replacement parts cost for these 63 engines would be \$43,545 per engine, and that compliance with this proposed AD for these 63 engines would require 0 additional hours of labor per engine since the parts are already exposed during LPT overhaul. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$2,995,065.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States,

or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Pratt & Whitney Division: Docket No. FAA- 2015-0787; Directorate Identifier 2015-NE-10-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to:

(1) All Pratt & Whitney Division (PW) PW4164, PW4168, PW4168A, PW4164C, PW4164C/B, PW4164-1D, PW4168-1D, PW4168A-1D, PW4170, PW4164C-1D, and PW4164C/B-1D turbofan engines with a low-pressure turbine (LPT) 4th stage inner air seal (IAS), part number (P/N) 51N038, installed.

(2) All PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4062A, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4460, PW4462, and PW4650 turbofan engines with an LPT 4th stage IAS, P/N 51N038, installed.

(d) Unsafe Condition

This AD was prompted by the discovery, during routine overhaul of the LPT, of cracks in the barrel section of the 4th stage IAS which could, if not corrected, result in uncontained IAS release, damage to the engine, and damage to the aircraft. We are issuing this AD to prevent failure of the LPT 4th stage IAS, which could lead to an uncontained IAS release, damage to the engine, and damage to the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done. For the engines listed in paragraph (c)(1) of this AD:

(1) At each LPT overhaul after the effective date of this AD remove from service the LPT 4th stage IAS, P/N 51N038.

(2) At each engine shop visit after the effective date of this AD, remove from service the LPT 4th stage IAS, P/N 51N038, if it has more than 10,900 cycles since new.

(f) Installation prohibition

(1) Do not install any LPT 4th stage IAS, P/N 51N038, with more than 0 flight cycles on any engine listed in paragraph (c)(1) of this AD.

(2) Do not install on any engine listed in paragraphs (c)(2) of this AD, any LPT 4th stage IAS, P/N 51N038, which was previously installed on any engine listed in paragraph (c)(1) of this AD.

(g) Definitions

For the purposes of this AD:

(1) An LPT overhaul is defined as maintenance which involves disassembly of the LPT rotor module.

(2) An “engine shop visit” is the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine flanges (lettered flanges). The separation of engine flanges solely for the purpose of transportation without subsequent engine maintenance does not constitute an engine shop visit.

(h) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

(i) Related Information

(1) For more information about this AD, contact Katheryn Malatek, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7747; fax: 781-238-7199; email: katheryn.malatek@faa.gov.

(2) PW Alert Service Bulletin No. PW4G-100-A72-254, dated December 12, 2014, can be obtained from PW using the contact information in paragraph (i)(3) of this AD.

(3) For service information identified in this AD, contact Pratt & Whitney Division, 400 Main St., East Hartford, CT 06108; phone: (860) 565-8770; fax: (860) 565-4503.

(4) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call (781) 238-7125.

Issued in Burlington, Massachusetts, on May 13, 2015.

Colleen M. D'Alessandro,
Assistant Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

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